Listing of Claims

1. (Currently Amended) An electronic system, comprising:

a portable host device having a connector; and

an expansion module adapted for quick-connect engagement in and disengagement from the portable device via the connector, comprising:

~~a series of~~ one or more peripheral devices adapted to serve different classes of functions;

a non-volatile memory for storing information that pertains to circuit configuring the different classes of functions in the module;

a re-configurable unit adapted to be circuit modified to establish connections within the module, implement a certain class of functions ~~functional portions~~, and control the ~~system~~ module components to support the implemented class of functions;

a control device adapted, in cooperation with the host device, to control the circuit modification of the reconfigurable unit to support the implemented class of functions ~~re-configuring operations within the system upon connection of the module with the host device~~; and

a software algorithm adapted to instruct the control device in the circuit modification of the re-configurable unit ~~system to re-configure itself with respect to functionality~~.

2. (Currently Amended) A method of reconfiguring the functionality of a portable electronic device, comprising:

connecting an expansion module to the portable electronic device;

reading applications resident on the portable electronic device;

upon receiving a request to activate a new function to be provided by the portable electronic device, automatically circuit reconfiguring the expansion module to provide the new function requested.

3. (Currently Amended) The method of claim 2, wherein the step of automatically circuit reconfiguring comprises verifying that the request is consistent with the functions that are capable of being provided by the expansion module.

4. (Currently Amended) The method of claim 2, wherein the step of automatically circuit reconfiguring comprises selecting components within the expansion module to perform the new function requested, and deselecting components within the expansion module that are not needed to perform the function requested.

5. (Original) The method of claim 2, further comprising signaling completion of the reconfiguring.

6. (Currently Amended) The method of claim 2, wherein the step of automatically circuit reconfiguring comprises modifying an address space in memory in the expansion module to execute drivers within the expansion module to execute the new function requested.

7. (Original) The system of claim 1, wherein the re-configurable device comprises a field programmable gate array.

8. (Original) The system of claim 1, wherein the re-configurable device includes programmable circuitry.

9. (Original) The system of claim 1, wherein the peripheral devices include sensors.

10. (Original) The system of claim 1, wherein the peripheral devices include signal processing elements.

11. (Currently Amended) An expansion module adapted for quick-connect engagement in and disengagement from a portable, electronic ~~portable~~ host device, the module comprising:

~~a series of~~ one or more peripheral devices adapted to serve different classes of functions;

a non-volatile memory for storing information that pertains to circuit configuring the different classes of functions in the module;

a re-configurable unit adapted to be circuit modified to establish connections within the module, implement a certain class of functions ~~functional portions~~, and control the ~~system~~ module components to support the implemented class of functions;

a control device adapted, in cooperation with the host device, to control the circuit modification of the reconfigurable unit to support the implemented class of functions ~~re-configuring operations within the system upon connection of the module with the host device~~; and

a software algorithm adapted to instruct the control device in the circuit modification of the re-configurable unit ~~host device and the module to re-configure itself with respect to functionality~~.